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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/839,565

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William McFarland

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11/15/2006

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SAN JOSE, CA 95110

EXAMINER

ODOM, CURTIS B

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/839,565

Applicant(s)

MCFARLAND, WILLIAM

Examiner

Curtis B. Odom

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-5, 8, 9, 12, 13, 15-18, 20, 21, 24, 25 and 80-82 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-5, 8, 9, 12, 13, 15-18, 20, 21, 24 and 25 is/are allowed.
- 6) ☒ Claim(s) 80-82 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 8/24/2006 have been fully considered but they are not persuasive. Applicant states van Nee (U. S. Patent No. 6, 175, 550) fails to disclose that a second particular number of carriers is provided in addition to the second symbol rate for a second transmission of data during a subsequent period of time.

However, van Nee discloses transmitting (see column 6, lines 60-62) a group of symbols using a first particular number of carriers and a first particular symbol rate (data rate/symbol duration) during a first period of time according to Table 1 (see column 4, lines 32-50). Van Nee further discloses the number of carriers can be changed (see column 5, lines 58-67), wherein changing the number of carriers changes the data rate (see column 5, lines 60-63) and the symbol duration (see column 6, lines 55-59). The transmitter can begin with a low data rate during a first period and then transition to a high data rate during a second period (see column 7, lines 45-50). Van Nee further discloses other operating characteristics can be similarly monitored and scaled during a second period of time along with the data rate (see column 7, lines 61-63), wherein the other operating characteristics include symbol duration, bit per symbol per carrier, and the number of carriers (see column 3, lines 3-34). Van Nee also discloses transmitting a subsequent symbol duration and number of carriers to the receiver for configuration of the receiver (see column 7, lines 9-25) Thus, according to the disclosure above, it is the

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understanding of the examiner that the data rate and number of carriers can be changed (scaled) during a second transmission period.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 80-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Nee (previously cited in Office Action 6/14/2005) in view of Li (previously cited in Office Action 5/31/2006).

Regarding claim 80, van Nee discloses a method of communicating from a first transceiver (Fig. 1, block 11) in a wireless multicarrier system comprising the steps of:

transmitting (see column 6, lines 60-62) from the first transceiver (Fig. 1) a group of symbols using a first particular number of carriers and a first particular symbol rate (data rate) during a first period of time according to Table 1 (see column 5, lines 32-50); and

transmitting from the first transceiver another group of symbols using a second particular number of carriers by scaling the number of carriers (column 5, lines 59-67) and a second particular symbol (data) rate by scaling the number of bits per carrier (column 4, lines 29-43) during a subsequent period of time (column 7, lines 45-53), wherein other operating characteristics can be similarly monitored and scaled during a second period of time along with

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the data rate (see column 7, lines 61-63), wherein the other operating characteristics include symbol duration, bit per symbol per carrier, and the number of carriers (see column 3, lines 3-34),

wherein at least one of the second particular number of carriers is smaller than the first maximum number of carriers (column 6, lines 10-23),

and further configuring the first transceiver to transmit the another group of symbols using the second particular number of carriers and the second particular symbol rate using control circuitry 15 (column 4, lines 29-43 and column 6, lines 10-23).

Van Nee does not disclose the second particular number of carriers and the second particular symbol rate are identified in a header portion of the group of symbols transmitted at the first particular number of carriers and the first particular symbol rate.

However, van Nee does disclose transmitting a subsequent symbol duration and number of carriers to the receiver for configuration of the receiver (see column 7, lines 9-25). Li further discloses identifying a subsequent (second) data rate of information to be transmitted in the header portion of a current signal transmitting at a current (first) data rate (column 2, lines 42-54). Therefore, it would have been obvious to one skilled in the art to modify the system of van Nee to transmit the symbol duration and number of carriers in a header as disclosed by Li since Li states identification of a subsequent data (symbol) rate reduces processing load at the receiver (column 2, lines 47-51).

Regarding claim 81, van Nee further discloses both the second particular number of carriers and the second particular symbol rate are different than the first particular number of

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carriers and the first particular symbol rate by varying the transmission rate and scaling the number of carriers (column 5, lines 59-67).

Regarding claim 82 van Nee discloses the second particular number of carriers can be greater than the first particular number of carriers according to Table 1 and the second particular symbol (data) rate can be greater than the first particular symbol rate according to Table 1 after varying the transmission rate and scaling the number of carriers (column 5, lines 31-50).

#### ***Allowable Subject Matter***

4. Claims 2-5 and 15-18 are allowable over prior art references because related references do not disclose changing the symbol rate and number of carriers by controlling a frequency synthesizer used to clock a divide by N counter, IFFT, and parallel to serial converter. Claims 8, 9, 12, 13, 20, 21, 24 and 25 are allowable over prior art references because related references do not disclose controlling a number of carriers and symbol rate by placing zero magnitude signals on the carriers.

#### ***Conclusion***

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5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

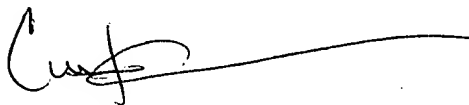
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Curtis Odom  
November 11, 2006



JAY K. PATEL  
SUPERVISORY PATENT EXAMINER